

September 19, 1980

## Interest Rates and Exchange Rates: II Policy Implications

Over the last two years, U.S. officials have become increasingly concerned with the effects of their actions upon the foreign-exchange markets. In November 1978 and again in October 1979, the Federal Reserve took actions to slow money growth, partly in order to stabilize the international value of the dollar. The procedures that the Fed adopted last October were designed in particular to promote steadier growth of the money stock. But these procedures allow interest rates to vary more freely than in the past, and this has generated some concern that increased interest-rate variations may lead to greater fluctuations in the value of the dollar.

In fact, the new control procedures may substantially alter the previous associations between interest-rate and exchange-rate changes. But we cannot say whether the overall variability of exchange rates will rise, because in one important sense the stability of the dollar may actually increase. In last week's article, we explained that spot exchange rates tend to rise when interest rates increase in *real* terms, while exchange rates tend to fall when interest rates increase due to higher expected inflation. We argue here that the new money-control procedures may increase variations in real interest rates, but that they also promise to reduce inflation expectations and so reduce interest-rate fluctuations from this source. As a result, U.S. interest rates and exchange rates may rise and fall together in the short-run—more often than they did before last October—but the long-term stability of the dollar may actually be enhanced.

### Old way

The widespread impression that the Federal Reserve previously sought to control interest rates is only partly correct. Before as well as after October 1979, its goal was control of the

nation's money supply. But the Fed previously used short-term interest rates as a guide, or intermediate target, in this endeavor. The rationale was that the amount of money the public wants to hold is determined primarily by its level of income (a proxy for the transaction demand for money) and by short-term interest rates (a proxy for the "opportunity cost" of holding non-interest-earning money balances). Higher interest rates thus would lower the amount of money demanded.

Under the old procedures, the Federal Reserve sought to vary interest rates so that the public would want to hold just the amount of money the Fed wanted to supply. For example, when it wanted to lower the level of money, the Fed would raise interest rates (by supplying less reserves to the banking system). As a result, the public's demand for money would fall, and with it the actual level of money. Thus, in theory, the Fed could keep money growth on target by raising or lowering interest rates.

In practice, the Fed found it very difficult to control money growth adequately using interest-rate targets. The reason is that "hitting" its money targets often required substantial changes in interest rates over fairly short intervals. But in view of the incomplete and imprecise nature of economic information, Fed officials were often reluctant to impose the "certain" cost of higher interest rates on the economy for the "uncertain" benefits of slowing money growth.

The Fed, under the old procedures, consequently limited variations in interest rates substantially in the short-run—and in the process, smoothed changes in real interest rates due to fluctuations in liquidity. It did this by supplying reserves to the banking system to accommodate fluctuations in their

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demand. But as a result, interest rates did not vary enough to keep money on target. In fact, money growth accelerated sharply during business-cycle expansions, as the Fed held interest rates down by accommodating reserve increases. On the other hand, money growth often fell below target during contractions, as the Fed kept interest rates from falling by withdrawing reserves from the banking system.

Consequently, increasingly violent and prolonged fluctuations in money growth occurred about a rising trend. This led to ever-higher and more variable inflation, and thus to increasing variations in the inflation-premium component of interest rates. Thus, much of the rise in interest rates in recent years has been associated with a rise in inflation (see chart). As explained in last week's article, this common factor—inflation—led to the 1977-78 pattern of rising U.S. interest rates and a falling dollar. On the other hand, the real interest rate—the difference between the market rate and the inflation premium—has generally varied much less than the inflation premium. This can be seen from the chart, where the real rate can be *approximated* as the difference between the market rate and the past inflation rate (a proxy for expected inflation). According to this measure, real interest-rate variations were fairly moderate until October 1979.

#### New way

The increasing difficulty of controlling inflation by targeting interest rates led the Fed last October to adopt a more direct method for controlling the amount of money available to the public. Most of this money is held as commercial-bank checking deposits, and these deposits are backed by the banking system's cash reserves that are supplied by the Federal Reserve. Under the new procedure, the Fed controls these cash reserves directly—allowing market interest rates to fluctuate more freely in the short-term—so as to promote a steady growth in the level of money. Once the inevitable technical difficulties attending such a substantial

procedural change are remedied, the new technique promises to promote greater stability in money growth—and hence lower and more stable inflation. But because this approach will not automatically accommodate short-term changes in real interest rates, we might expect interest rates (and exchange rates) to vary more than before. But will this really be the case? Perhaps in the short-run but not in the long-run.

In fact, while the old procedures probably reduced short-term variations in real interest rates, they also permitted overshooting of the money-supply targets and thus increased inflation expectations, and hence the inflation premium. Conversely, the new procedure may lead to more short-term variation in real interest rates—but less long-term variation in market rates, provided it is successful in controlling money growth.

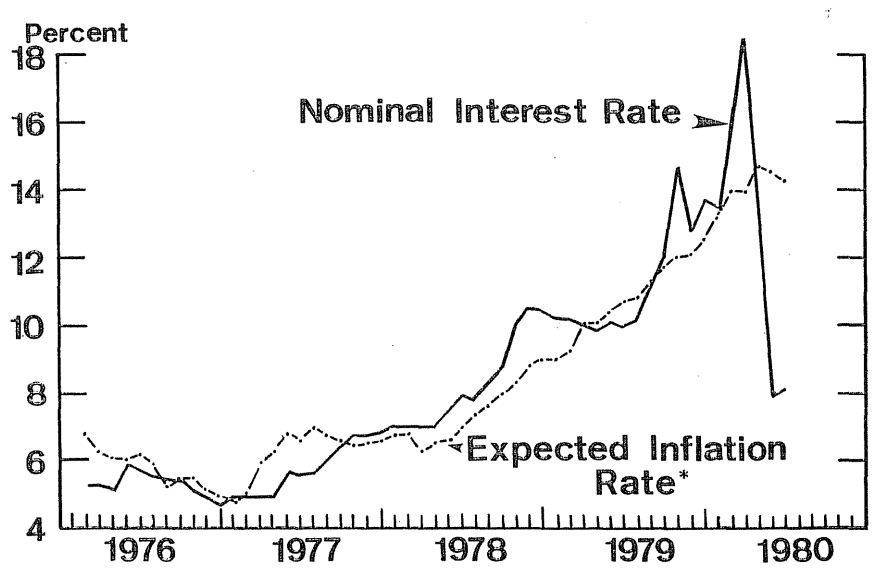
This observation has two important consequences for exchange rates. First, under the new procedures, changes in market interest rates may reflect variations in real rates, rather than inflation premia, more often than previously. If so, the value of the dollar is likely to rise more often than before whenever U.S. interest rates increase relative to abroad. Of course, in view of the impact of foreign interest rates on exchange rates, the extent of the change in the relation between interest rates and exchange rates will also depend on foreigners' ability to control their own money growth and inflation.

Perhaps most important, the new procedures are likely to promote the longer-term stability of the dollar, even if they lead to somewhat greater short-run fluctuations. Over the last seven years, prolonged rises and declines in currency values have usually resulted from fluctuations in money growth and inflation rates here and abroad. Indeed, many of the more violent and sudden changes in the dollar, such as during mid-1978 and mid-1979, have been prompted by shifts in market perceptions about the inflation policies of the U.S. and other industrial countries. Gen-

erally, market decisions about foreign trade and investment are made on the basis of long-term rather than short-term trends in exchange rates. Thus the beneficial effect of greater long-run dollar stability is likely to outweigh any rise in short-term variability for

trade and investment. Hence, on balance, the new Fed procedures for controlling money and inflation are likely to prove beneficial to the world economy.

**Michael Keran & Charles Pigott**



\*Estimated based on past inflation

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**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**  
(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 9/3/80	Change from 8/27/80	Change from year ago	
			Dollar	Percent
Loans (gross, adjusted) and investments*	139,542	1,043	6,808	5.1
Loans (gross, adjusted) — total#	117,714	936	8,218	7.5
Commercial and industrial	34,120	308	2,168	6.8
Real estate	47,490	63	7,282	18.1
Loans to individuals	23,558	26	382	1.6
Securities loans	987	115	— 927	— 48.4
U.S. Treasury securities*	6,491	154	— 1,189	— 15.5
Other securities*	15,337	— 47	— 221	— 1.4
Demand deposits — total#	47,462	5,174	936	2.0
Demand deposits — adjusted	32,860	1,754	1,523	4.9
Savings deposits — total	29,543	150	— 1,075	— 3.5
Time deposits — total#	63,063	233	10,177	19.2
Individuals, part. & corp.	54,848	201	10,324	23.2
(Large negotiable CD's)	23,769	202	4,508	23.4
<b>Weekly Averages of Daily Figures</b>	<b>Week ended 9/3/80</b>	<b>Week ended 8/27/80</b>	<b>Comparable year-ago period</b>	
<b>Member Bank Reserve Position</b>				
Excess Reserves (+)/Deficiency (—)	— 8	— 86	23	
Borrowings	133	24	142	
Net free reserves (+)/Net borrowed(—)	— 141	— 110	— 119	

\* Excludes trading account securities.

# Includes items not shown separately.

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